ABSTRACT

This invention provides compositions, organisms and methodologies employing a novel human protein kinase, MCRK2. The novel human kinase has sequence homology to rat myotonic dystrophy kinase-related Cdc42 binding kinase (MRCK) alpha. The gene encoding the novel kinase is localized in locus 1q42 of human chromosome 1. The novel protein kinase comprises multiple functional/structural domains that include a kinase domain, a pkinase_C domain, a DAG-PE binding domain, and a CNH domain. The sequence and structure similarity between the novel human protein and rat MRCK alpha indicates that the novel human protein may function as a downstream effector of Cdc42 in cytoskeleton reorganization.